

DRAWINGS ATTACHED.

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## COMPLETE SPECIFICATION.

## Handbag of Sheet Plastic.

We, ASF GLEITVERSCHLUSS G.m.b.H. a German Body Corporate of Furtherstrasse 36, Nurnberg, Germany, do hereby declare the invention for which we pray that a  
5 patent may be granted to us, and the method by which it is to be performed to be particularly described in and by the following statement:—

The present invention relates to a hand-  
10 bag of thin sheet plastic which is designed in the form of a delivery or shopping bag or the like.

Such handbags are nowadays used extensively by stores in place of the bulky  
15 cartons such as were formerly used for packing, for example, ready-made clothing for men, women, and children for their delivery to the individual purchasers. These plastic handbags are so well liked, not only  
20 because they satisfy the requirements of their original purpose, but also because of their great reuse value especially in households for storing other articles, for example, food items. The known delivery  
25 bags of sheet plastic have, however, the disadvantage that the bag opening cannot be closed absolutely air-tight and that therefore moisture and dust can enter and effect the items which are stored in the bag. The  
30 utility of these known bags of sheet plastic is also limited due to the fact that they consist of very thin material, for example, of a thickness of 0.1 mm, and that they are therefore easily deformed by the weight of  
35 the articles therein. The deformation occurs primarily at the handle portion, that is, at the ends of the upper edge portion of the bag, and there is the further possibility that the handle will tear out of the thin  
40 material at this upper edge portion.

Although these disadvantages which are due to the lack of solidity of the upper edge

portion of the plastic bag adjacent to its opening may be overcome by reinforcing this portion, it is evident that such a reinforcement considerably increases the  
45 costs of production of the bag, especially since each of the two edges has to be separately reinforced. Apart from this fact, however, it is well known that, depending upon the particular type and arrangement of the reinforcement and the handle, it is either very difficult or entirely  
50 impossible to provide such a bag with a tightly sealing closure, for example, a slide fastener or pressure closure of a conventional type, which extends along the entire bag opening. As already indicated, it is, however, in many cases very desirable for  
55 the original purpose of such a handbag and especially also for its subsequent reuse that it be provided with a tightly sealing closure for protecting its contents from moisture and dust.

It is therefore the object of the present  
65 invention to provide a handbag in the form of a delivery bag or shopping bag of thin sheet plastic which is sufficiently solid to sustain the forces which tend to deform the bag or the upper edge portion thereof, and  
70 which is designed so as to permit the bag opening to be tightly closed so that the bag may not only be used for the purpose for which it is originally intended but also subsequently for many additional purposes,  
75 so that its total service value is very high.

For attaining the above-mentioned object, the invention provides in general that the bag has a closed upper edge portion which extends along substantially the  
80 whole of the width and forms the support of a reinforcing insert which preferably extends substantially along the entire width of the bag and slightly above the bag open-

[Price

ing which also extends along substantially the whole of the width of the bag. According to the invention, the edges of this opening are also reinforced by means of continuous longitudinal extruded profile strips of plastic of a slide or snap fastener of a known type which are adapted to interengage with each other and to be clamped together to close the bag opening. The reinforcing insert which may be in the form of a strip or rod and preferably consists of an elastic flexible material, for example, metal or plastic, is operatively associated with the profile strips of the slide or snap fastener in stabilizing the bag at the area of its upper edge portion, that is, the area which is the most susceptible to being deformed when the bag is filled. When the fastener is closed and the profile strips thereof interengage with each other and are clamped together, these strips—since they extend continuously along the entire length of the bag opening—form an uninterrupted, uniformly closed surface, so that when the bag is filled, the tension which is exerted upon the wall of the bag containing the opening will be transmitted uniformly and to a large extent to the reinforcing insert which is provided immediately above the fastener and be taken up by the latter. In the same connection it is another important feature of the invention that the fastener itself, because of its greater thickness in comparison to that of the bag material, contributes considerably to the solidity of the area of the upper edge portion and the bag opening. The ends of the fastener are prevented from bending downwardly by the reinforcing insert which is located directly above the fastener. It is also an important advantage of the bag according to the invention that because of the closed construction of its upper edge portion, only a single reinforcing insert is required for stabilizing this edge portion whereas the known delivery or shopping bag of sheet plastic with an opening at the upper end required separate reinforcing inserts for each of the edge portions adjacent to the bag opening.

From the above description it will therefore be seen that the object of the invention is attained by a particular arrangement of the reinforcing insert and of the slide or snap fastener for closing the bag opening and a particular association of these elements with each other.

The aforementioned as well as additional features and advantages of the present invention will become more clearly apparent from the following detailed description thereof which is to be read with reference to the accompanying drawings, in which:

Figure 1 shows a perspective view of a delivery or shopping bag according to the

invention which is provided with a handle which is supported by the lower edge of the reinforcing insert;

Figure 2 shows a perspective view of a bag according to a modification of the invention in which the central part of the reinforcing insert is bent so as to form the handle;

Figure 3 shows a perspective view of a bag according to a further modification of the invention in which a handle is connected to the reinforcing insert;

Figure 4 shows an enlarged cross section which is taken along the line IV—IV of Figure 1; while

Figures 5 to 8 show cross sections of different slide or snap fasteners as examples of the types of fasteners which may be employed for carrying out the invention.

As illustrated in the drawings, the delivery or shopping bag according to the invention consists of a bag-shaped container 1 of sheet plastic, the upper end of which is folded over and contains a reinforcing insert 3 which extends almost along the entire width of the bag and abuts against and is supported by the closed upper edge 2 of the bag when the bag is filled and the weight of its contents is suspended on the reinforcing insert. This insert 3 may be either in the form of a continuous strip, as shown in Figures 1, 3, and 4 or consist of a rod or wire, as shown in Figure 2. Preferably, the reinforcing insert 3 consists of highly resilient steel so that, in the event that it is bent under an excessive load in the bag, it will immediately spring back to its original straight shape as soon as it is again relieved of this load with the result that the entire bag will then also regain its original shape.

A short distance underneath the reinforcing insert 3 the bag opening 4 is provided which extends almost along the entire width of the bag and the edges of which are reinforced by the continuous plastic profile strips 5 and 6 of a slide or snap fastener, as shown particularly in Figure 4. When this fastener is closed, the two plastic profile strips 5 and 6 interengage with each other and are clamped together, as shown by the different embodiments of such fasteners according to Figures 4 to 8.

The plastic strips 5 and 6 which are connected to or separated from each other in the conventional manner by a sliding tab to close or open the fastener are secured by lateral connecting webs 5' and 6' to the sheet plastic of bag 1, preferably by welded seams 7 and 8, although this may also be done in any other suitable manner, for example, by gluing.

According to a preferred embodiment of the invention, as shown in Figure 4, the connecting web 5' of the upper plastic fastener

strip 5 is inserted between and welded to both walls of the fold along a line parallel to and underneath the reinforcing insert 3, so that the latter is completely enclosed within the longitudinal space 9 within this fold. Of course, the upper end of the side wall of the bag forming the fold may also be folded over the reinforcing insert 3 and be secured directly to the inner surface of this side wall, while the connecting web 5<sup>1</sup> is secured to the outer surface of the fold underneath the reinforcing insert.

Since the upper fastener strip 5 is firmly secured and sealed to both walls of the fold containing the reinforcing insert 3, the part of the fold above the sealed edges together with the reinforcing insert 3 and the handle 10 may be easily cut or torn from the bag by hand. The remaining bag will then be soft and pliable and may be rolled or folded together to take up very little space. Since its opening may still be tightly closed by the fastener 5, 6, the bag may then be used for many other purposes, for example, for storing textiles, food items, or the like so as to keep them safe from moisture, dust, or insects.

The plastic bag according to the invention is preferably provided with a handle 10 which may be either connected to or integral with the reinforcing insert 3, as shown in Figures 2 and 3, or it may form a part separate from the reinforcing insert, as shown in Figure 1. In the latter case, the handle 10 may, for example, consist of a cord or ribbon which is drawn through perforations in both layers of the fold which are provided in both layers of the fold in the space 9 directly underneath the lower edge of the reinforcing insert 3 and above the upper edge of the fastener strip 5, 5<sup>1</sup>. When the bag according to Figure 1 is carried by the handle 10, the weight of the bag's contents is then directly transmitted by the reinforcing insert 3 to the handle. According to the embodiments of the invention as shown in Figures 2 and 3, however, the handle 10 is connected directly to the reinforcing insert 3 near the center thereof and is passed to the outside through a central slit in the upper edge 2 of the bag.

The invention is not limited to the specific embodiments thereof as described above and illustrated in the drawings, but it is capable of numerous modifications within the scope of the appended claims. Thus, for example, the connecting web 5<sup>1</sup> of the upper fastener strip 5 may also be extended up to the upper edge 2 and be secured near this edge to the rear wall of the bag, for example, by welding. The invention is also not limited to the particular

type of bag as illustrated in the drawings, but may also be applied to plastic bags of other designs, for example, to bags with a flat bottom. Furthermore, the slide or snap fastener of the bag may also be of any other suitable design as long as its profile strips interengage with each other so as to seal the bag tightly.

#### WHAT WE CLAIM IS:—

1. A handbag made of sheet plastic and having an upper edge closed along substantially the whole of the width of the bag and forming a support of a reinforcing insert preferably extending substantially along the entire width of the bag and slightly above the bag side opening which also extends along substantially the whole of the width of the bag and the edges of which are reinforced by means of the continuous plastic profile strips of a slide or snap fastener of a type known as such which, when the fastener is closed, interengage with each other and are clamped together.

2. A handbag as defined in claim 1, wherein the upper end of one side wall of the bag is folded over to form the upper edge of the bag and the free edge of the folded part is secured by a seam along its length to said side wall along a line spaced from and substantially parallel to the upper edge, and that the reinforcing insert is disposed within the fold.

3. A handbag as defined in claim 2, wherein the seam of the folded part is produced by welding.

4. A handbag as defined in any one of the preceding claims, wherein each plastic profile strip of the fastener has a lateral connecting web thereon, and that the connecting web of the upper profile strip is secured to the folded part and the connecting web of the lower profile strip is secured to the upper edge portion of the other side wall of the bag.

5. A handbag as defined in claim 4, wherein the connecting webs of the profile strips are welded to the folded part and to the upper edge portion of the other side wall of the bag.

6. A handbag as defined in any one of the preceding claims, wherein a handle is connected to the reinforcing insert and is passed through the upper edge of the bag.

7. A handbag as defined in any of claims 1 to 5, wherein a handle is passed through the wall of the bag enclosing the reinforcing insert through apertures directly underneath said insert so that said handle is supported by said insert.

8. A handbag made of sheet plastic substantially as described in the foregoing specification and as illustrated in the accompanying drawings.

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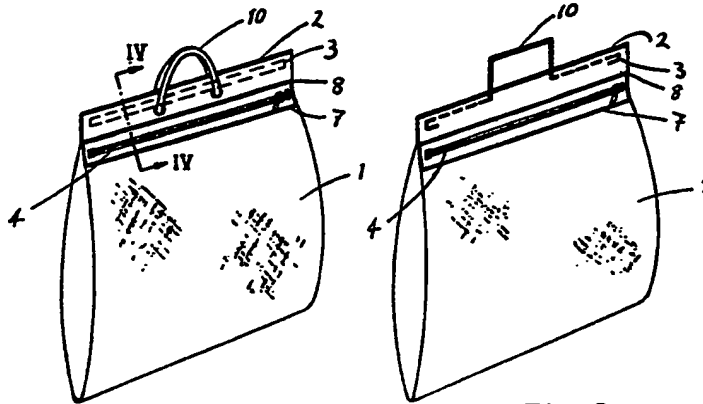


Fig. 1

Fig. 2

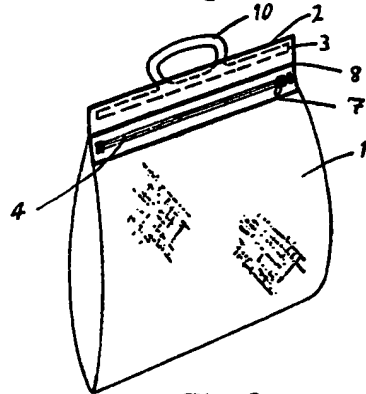


Fig. 3

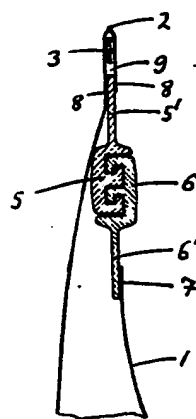


Fig. 4

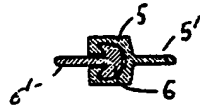


Fig. 6



Fig. 5

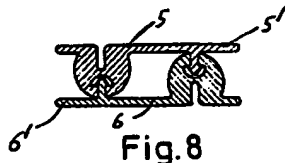


Fig. 8

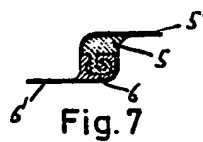


Fig. 7